

Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Previously presented) A device for thermal management of an LED, said device comprising:

a heatsink;
a substrate overlying said heatsink;
a trace layer overlying and adjacent to said substrate;
a pad overlying and adjacent to said trace layer, said pad being operable to mount said LED; and

a via extending through said substrate, wherein said via is in thermal communication with said trace layer and said heatsink to transfer to said heatsink at least a portion of any heat applied to said trace layer by said LED.

2. (Previously presented) The device of claim 1, further comprising:

a bonding layer between said substrate and said heatsink.

3. (Previously presented) The device of claim 2, wherein said bonding layer is a thermally conductive adhesive.

4. (Previously presented) The device of claim 2, wherein said bonding layer is a thermally conductive tape.

5. (Previously presented) The device of claim 1, wherein said substrate is a multi-layered substrate.

6. (Previously presented) The device of claim 1, wherein said substrate is a printed circuit board.

7. (Previously presented) The device of claim 1, wherein said substrate is a flexible substrate.

8. (Previously presented) The device of claim 1, wherein said via includes: a sidewall defining a channel through said substrate, said channel interfacing with said trace layer to thereby establish the thermal communication between said via and said trace layer.

9. (Previously presented) The device of claim 8, further comprising: a thermal conductive material filling at least a portion of said channel.

10. (Previously presented) The device of claim 1, wherein said via includes: a sidewall defining a channel through said substrate, said channel interfacing with said heat sink to thereby establish the thermal communication between said via and said heat sink.

11. (Previously presented) The device of claim 10, further comprising: a thermal conductive material filling at least a portion of said channel.

12. (Previously presented) A device for thermal management of an LED, said device comprising:

a heatsink;
a trace layer; and

a flexible substrate in thermal communication with said trace layer and said heatsink to transfer to said heatsink any heat applied to said trace layer by said LED.

13. (Previously presented) The device of claim 12, further comprising:

a via extending through said substrate, wherein said via is in thermal communication with said trace layer and said heatsink to enhance the transfer to said heatsink of any heat applied to said trace layer by said LED.

14. (Previously presented) The device of claim 13, wherein said via includes:

a sidewall defining a channel through said substrate, said channel interfacing with said trace layer to thereby establish the thermal communication between said via and said trace layer.

15. (Previously presented) The device of claim 14, further comprising:

a thermal conductive material filling at least a portion of said channel.

16. (Previously presented) The device of claim 13, wherein said via includes:

a sidewall defining a channel through said substrate, said channel interfacing with said heat sink to thereby establish the thermal communication between said via and said heat sink.

17. (Previously presented) The device of claim 16, further comprising:

a thermal conductive material filling at least a portion of said channel.

18. (Previously presented) A device for thermal management of an LED, said device comprising:

 a heatsink;
 a substrate overlying said heatsink;
 a trace layer overlying and adjacent to said substrate;
 a pad overlying and adjacent to said trace layer, said pad being operable to mount said LED; and

 a via including a sidewall defining a channel extending through said substrate, wherein said channel is beneath said trace layer and above said heatsink to transfer any heat applied to said trace layer by said LED to said heatsink.

19. (Previously presented) The device of claim 18, further comprising:

 a thermal conductive material filling at least a portion of said channel.

20. (Previously presented) The device of claim 18, further comprising:

 a bonding layer between said substrate and said heatsink.

21. (Previously presented) The device of claim 1, wherein:

 said via includes a sidewall defining a channel through said substrate, said channel interfacing with said trace layer and said heat sink to thereby establish the thermal communication between said trace layer and said heat sink, a thermal conductive material filling at least a portion of said channel; and

 said thermal conductive material is different from the material of said sidewall.

22. (Previously presented) The device of claim 21, wherein:

 said thermal conductive material is solder and the material of said sidewall is copper.